CLAIMS

WHAT IS CLAIMED IS:

1. A client-server computer system comprising:

at least one client application server;

an application server accessible by a plurality of client application servers via a plurality of application software protocols, wherein said application server provides a data manipulation service on data in response to a manipulation request from a client application server; and,

a storage mass coupled to said application server for storing a system of dynamically maintainable manipulation functions for performing said manipulation service.

2. A client-server computer system according to claim 1, wherein said storage mass comprises an Oracle database.

3. A client-server computer system according to claim 1, wherein said manipulation functions are represented by a storage schema in the form of Lightweight Directory Access Protocol.

4. A client-server computer system according to claim 2, wherein said Oracle database contains a table-based system of rules organized into at least three hierarchically organized views.

5. A client-server computer system according to claim 3, wherein the storage schema represented by Lightweight Directory Access Protocol represents a table-based system of rules organized into at least three hierarchically-organized views.

6. A client-server computer system according to claim 2, wherein said Oracle database stores manipulation functions stored as hierarchically-organized views that are dynamically updateable by an external administrator.

7. A client-server computer system according to claim 3, wherein said storage schema in the form of Lightweight Directory Access Protocol represents manipulation functions stored as hierarchically-organized views that are dynamically updateable by an external administrator.

8. A client-server computer system according to claim 4, wherein said application server and said Oracle database are centrally located to said plurality of client application servers and said manipulation functions are maintainable by a remote administrator.

9. A client-server computer system according to claim 5, wherein said application server and said storage schema in the form of Lightweight Directory Access Protocol are centrally located to said plurality of client application servers and said manipulation functions are maintainable by a remote administrator.

10. An application server comprising:

a plurality of client application servers;

means for performing manipulation services in response to manipulation requests from said plurality of client application servers, said means for performing manipulation services being coupled to said plurality of client application servers; and,

means for storing and dynamically maintaining a hierarchically-organized system of a table-based system of manipulation rules coupled to said means for performing manipulation services.

11. A client-server computer system according to claim 10, wherein said means for storing manipulation rules comprises an Oracle database.

12. A client-server computer system according to claim 10, wherein said manipulation rules are stored in a schema in the form of Lightweight Directory Access Protocol.

13. A client-server computer system according to claim 11, wherein said Oracle database contains a table-based system of rules organized into at least three hierarchically-organized views.

14. A client-server computer system according to claim 12, wherein said schema in the form of Lightweight Directory Access Protocol represents a table-based system of rules organized into at least three hierarchically-organized views.

15. A client-server computer system according to claim 11, wherein said Oracle database stores manipulation functions stored as hierarchically-organized views that are dynamically updateable by an external administrator.

16. A client-server computer system according to claim 12, wherein said storage schema in the form of Lightweight Directory Access Protocol represents manipulation functions stored as hierarchically-organized views that are dynamically updateable by an external administrator.

17. A client-server computer system according to claim 13, wherein said means for performing manipulation services and said Oracle database are remotely located to said plurality of client application servers and wherein said manipulation rules are maintainable by a remote administrator.

18. A client-server computer system according to claim 14, wherein said application server in the form of Lightweight Directory Access Protocol are remotely located to said plurality of client application servers and further comprises means for maintaining said manipulation functions.

19. A system for providing an application service, the system comprising:

an application server;

a plurality of applications coupled to the application server;

one or more application programming interfaces, the one or more application programming interfaces for coupling said plurality of applications and said application server and for passing data manipulation requests and data via a plurality of computer network protocols; and

at least one dynamically-maintainable data schema coupled to said application server.

20. A client-server computer system according to claim 19, wherein said data schema is at least partially in the form of an Oracle database.

21. A client-server computer system according to claim 19, wherein said data schema comprises manipulation functions at least partially in the form of Lightweight Directory Access Protocol.

22. A client-server computer system according to claim 20, wherein said data schema contains a table-based system of rules organized into a plurality of hierarchically-organized views.

23. A client-server computer system according to claim 21, wherein a data schema in the form of Lightweight Directory Access Protocol represents a table-based system of rules organized into a plurality of hierarchically-organized views.

24. A client-server computer system according to claim 20, wherein said data schema

stores manipulation functions stored as hierarchically organized views.

25. A client-server computer system according to claim 21, wherein said schema in the form of Lightweight Directory Access Protocol represents manipulation functions stored as hierarchically-organized views that are dynamically updateable.

26. A client-server computer system according to claim 22, wherein said application server and said data schema are remotely located to a plurality of client application servers and said manipulation rules are maintainable by a remote administrator.

27. A client-server computer system according to claim 23, wherein said application server and said Lightweight Directory Access Protocol are remotely located to a plurality of client application servers and said manipulation rules are maintainable by a remote administrator.

28. The client-server computer system of claim 26, wherein the application passes data to said application server in the form of a string.

29. The client-server computer system of claim 27, wherein the application server treats data passed to it as a string.

30. The client-server computer system of claim 28, wherein the application server receives data from said application in the form of a Hashtable.

31. A system for providing data manipulation service on based on requests from applications running a plurality of software protocols, the system comprising:

a data network;

an application server, the application server in communication with the data network;

an application, the application in communication with the application server, the application providing manipulation requests to the application server via the data network;

one or more open application programming interfaces, the one or more application programming interfaces capable of handling a plurality of software protocols in communication with the application server; and

a data schema accessible by said application server in communication with said data network, for storing manipulation functions.

32. A system according to claim 31, wherein said data schema comprises an Oracle database.

33. A computer system according to claim 31, wherein said manipulation functions are stored in the format of a Lightweight Directory Access Protocol.

34. A system according to claim 32, wherein said Oracle database contains a table-based system of rules organized into hierarchically-organized views.

35. A system according to claim 33, wherein said schema in the form of a Lightweight

Directory Access Protocol represents a table-based system of rules organized into hierarchically-organized views.

36. A system for providing an application service, the system comprising:

means for receiving a service request from a customer, the customer requesting data to be manipulated and passing data to said system in the form of hashtables;

means for sending a manipulation request instruction to an application server corresponding to data to be manipulated;

means for sending a service request from the application server to a data base, the service response based at least in part on the manipulation request;

means for performing hierarchically-based manipulation services on the data;

means for remotely updating said database based on current manipulation requirements of said system;

means for sending a manipulation result from the application server to said customer based at least in part on the manipulation request; and

means for providing a response to said system from said customer to said system in response to said manipulation result.

37. A computer-readable medium storing a plurality of instructions adapted to be executed by a processor for providing an application service, the plurality of instructions comprising instructions to:

receive a service request from a customer data device, the customer data device including data to be manipulated;

generate a service session instruction, the service session instruction based at least in part on the service request;

send the service session instruction to one or more open application programming interfaces, the service session instruction corresponding to one or more data manipulation requests from said customer data device;

perform one or more manipulation functions based on stored rules in a data base; and

send a manipulation service response to the customer data device, the manipulation service response based on the service request.

38. A medium according to claim 37, wherein said database comprises an Oracle database and further comprises an instruction to load said database into a memory upon startup of said application service.

39. A medium according to claim 37, wherein said manipulation functions are stored at least partially in the format of Lightweight Directory Access Protocol and further comprise an instruction to load said database into a memory upon startup of said application service.

40. A method of providing manipulation data service with a client-server computer system comprising the steps of:

coupling a data manipulation request between a client application server and an application server;

providing data manipulation service request instructions to a data schema in

response to said manipulation request coupled between said client application server and said application server;

retrieving a plurality of hierarchical dynamically maintained manipulation rules from a centralized storage mass coupled to said application server;

manipulating data in accordance with said manipulation rules; and

coupling a response to said client application server.

41. A method for providing an application service, the method comprising:

a step for sending a data manipulation service request from a user;

a step for generating a manipulation service instruction, the service instruction based at least in part on a manipulation service request from said user;

a step for sending the service instruction to one or more data storage schemas via one or more application programming interfaces, the service instruction corresponding to one or more manipulation requests from the user;

a step for dynamically updating a table of manipulation rules stored in said one or more data schemas based on changes to the application service;

a step for calling up at least one table of manipulation rules from said one or more data storage;

a step for performing manipulation functions on data in accordance with updated manipulation rules stored in said table and the manipulation request from said user; and

a step for sending service response to the user requesting manipulation service.